

1. A compressed-gas gun-firing mechanism which comprises a barrel having a distal portion and a proximal portion;

a cylindrical bolt in said proximal portion, said bolt having a given outer radius and a gas discharge channel extending from a radial intake port in a proximal section of the bolt to an axial discharge port at the distal end of the bolt;

said channel defining an axial zone and an elbow between said intake port and said axial zone;

whereby when said bolt is axially translated by a trigger mechanism said intake port lines up with a gas delivery port in the proximal section of the barrel allowing compressed gas to enter said channel and apply recoiling pressure against said elbow portion, while, at the same time, applying firing pressure to a projectile located in said distal portion of the gun barrel.

2. The firing mechanism of Claim 1 which further comprises:

a sleeve slidably inserted between said bolt and barrel and having a leading portion and a trailing portion;

said sleeve further having a radial aperture in said trailing portion;

resiliently compressible means between said bolt and said sleeve for biasing said leading portion ahead of said bolt and for keeping said intake port in line with said aperture;

said barrel further having a radial projectile-

admitting first port in said distal portion and a radial gas-admitting second port in said proximal portion; and

means for translating said bolt and sleeve from a recoiled position wherein said leading portion obstructs said gas delivery port, to a firing position wherein said gas delivery port, aperture, and intake port are aligned up to allow expansion of gas through said channel and into said barrel;

whereby a projectile partially inserted into said distal section of the barrel causes said sleeve to resiliently slide over said barrel and said leading portion to close said intake port, thus preventing expansion of gas into said bolt and barrel.

3. The firing mechanism of Claim 2 which further comprises:

means for feeding projectiles through said first port into said distal portion; and

at least one spherical projectile having a radius commensurate with said given outer radius of the bolt.

4. The firing mechanism of Claim 3, wherein said projectile comprises a ball having a soft, pliable envelope.

5. The firing mechanism of Claim 4 which further comprises a source of compressed gas.

6. The firing mechanism of Claim 5, wherein said compressed

gas comprises air.

7. The firing mechanism of Claim 6, wherein said bolt further comprises:

an axle extending axially and rearwardly from said bolt to a proximal end; and

a barrier secured to said proximal end; and

wherein said resiliently compressible means comprise a coil spring engaged over said axle between said sleeve and said barrier.

8. The firing mechanism of Claim 7 which further comprises a strip pin radially linking said barrier to a trigger mechanism.

9. The firing mechanism of Claim 2 which further comprises means for preventing rotational movement of said sleeve in relation to said bolt.

10. The firing mechanism of Claim 9, wherein said means for preventing comprises said sleeve having an axial slot and said bolt having a radial nib engaged into said slot.

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11. In a device for firing a projectile out of a barrel having a given cross-sectional caliber, by expansion of a compressed gas, wherein said projectile is radially admitted into said barrel through a first port located in a

first portion of said barrel, and said compressed gas is radially admitted into said barrel through a second port located in a second portion of said barrel proximally located from said first portion, a firing mechanism for controlling admission of said gas, which comprises:

a tubular sleeve having an outer cross-section slidably commensurate with said caliber, a given inner cross-section, a leading portion and a trailing portion;

said sleeve further having a radial aperture in said trailing portion;

a bolt engaged within said sleeve and having an outer cross-section slidably commensurate with said inner cross-section;

a gas-discharged channel within said bolt extending from a radial intake port in a proximal section of said bolt to an axial discharge port at a distal end of said bolt;

said channel including an axial zone proximate to said discharge port and a rounded elbow zone between said intake port and said axial zone;

resiliently compressible means for biasing said leading portion of said sleeve ahead of said bolt and for keeping said intake port in line with said aperture;

means for translating said sleeve and bolt from a recoil position wherein said leading portion closes said second inlet, to a firing position wherein said second inlet, aperture and intake port are aligned to allow expansion of gas into said barrel;

whereby any obstacle in said first portion of the barrel, such as a projectile partially inserted through said first port, will cause sleeve to resiliently slide over said bolt and cause a misalignment of said aperture and intake port, preventing expansion of gas into said barrel.